



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

APR 25 2019

REPLY TO THE ATTENTION OF

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Anthony Saviano
North American General Counsel and Officer of Cytec Industries, Inc.
Cytec Industries, Inc.
3115 Miller Road
Kalamazoo, Michigan

Re: Administrative Order EPA-5-19-113(a)-MI-01

Dear Mr. Saviano:

Enclosed is an executed original of the Administrative Consent Order regarding the above captioned case. If you have any questions about the Order, please contact me at 312-886-6797.

Sincerely,

A handwritten signature in black ink, which appears to read "Sarah Marshall", is written over a horizontal line.

Sarah Marshall, Chief
Air Enforcement and Compliance Assurance Section (MI/WT)

Enclosure

cc: Cathleen Martwick/C-14J
Jenine Camilleri, Enforcement Unit Supervisor, Air Quality Division, MDEQ
Mary Douglas, Kalamazoo District Supervisor, MDEQ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

In the Matter of:)	EPA-5-19-113(a)-MI-01
)	
Cytec Industries, Inc.)	Proceeding Under Sections 113(a)(1) and
Kalamazoo, Michigan)	114(a)(1) of the Clean Air Act, 42 U.S.C.
)	§§ 7413(a)(1) and 7414(a)(1)

Administrative Consent Order

1. The Director of the Air and Radiation Division, U.S. Environmental Protection Agency (EPA), Region 5, is issuing this Order to Cytec Industries, Inc. (Cytec) under Sections 113(a)(1) and 114(a)(1) of the Clean Air Act (CAA), 42 U.S.C. §§ 7413(a)(1)(3) and 7414(a)(1).

2. Each state must submit to the Administrator of EPA a plan for attaining and maintaining the National Ambient Air Quality Standards under Section 110 of the CAA, 42 U.S.C. § 7410.

3. On May 31, 1972, EPA approved the State of Michigan's February 3, 1972 State Implementation Plan (SIP) submittal. 37 Fed. Reg. 10873 (May 31, 1972). On May 6, 1990, EPA approved the State of Michigan's April 25, 1979 SIP submittal. 45 Fed. Reg. 29790 (May 6, 1990). On May 13, 1993, EPA approved the State of Michigan's October 10, 1986 SIP submittal (portions of which were withdrawn in a January 28, 1993 letter from the State of Michigan). 58 Fed. Reg. 28359 (May 13, 1993).

4. The Michigan SIP includes Mich. Admin. Code r. 336.1201 (1980). Mich. Admin. Code r. 336.1201 provides that a person shall not install, construct, reconstruct, relocate, or alter any process, fuel-burning, or refuse-burning equipment, or control equipment pertaining thereto which may be a source of an air contaminant, until a permit is issued by the commission. Mich. Admin. Code r. 336.1201 further provides that this permit shall be known as a permit to install and

shall cover construction, reconstruction, relocation, and alteration of equipment where such is installed.

5. Under Section 113(a)(1) of the CAA, 42 U.S.C. § 7413 (a)(1), the Administrator of EPA may issue an order requiring compliance to any person who has violated or is violating a SIP. The Administrator has delegated this authority to the Director of the Air and Radiation Division.

6. The Administrator of EPA may require any person who owns or operates an emission source to make reports; install, use and maintain monitoring equipment; sample emissions; and provide information required by the Administrator under Section 114(a)(1) of the CAA, 42 U.S.C. § 7414(a)(1). The Administrator has delegated this authority to the Director of the Air and Radiation Division.

Findings

7. Cytec owns and operates a chemical manufacturing facility located 3115 Miller Road in Kalamazoo, Michigan ("Facility").

8. Cytec began construction of process equipment that emits methanol, a volatile organic compound, at the Facility in 2005.

9. In 2012, Cytec expanded its Facility with the construction of additional equipment that also emits methanol.

10. Cytec did not obtain a permit to install for installation, construction or operation of methanol emitting equipment.

11. Cytec is subject to Michigan Admin. Code r. 336.1201.

12. Cytec owns or operates an emission source within the meaning of Section 114 (a)(1) of the CAA, 42 U.S.C. § 7414(a)(1). Therefore, Cytec is subject to the requirements of Section 114(a)(1).

13. On June 30, 2015, EPA issued to Cytec a notice of violation and finding of violation alleging that it violated the SIP provision and certain other allegations which EPA is no longer pursuing.

14. On October 28, 2015, January 17, 2017, September 20, 2018, October 10, 2018, and November 15, 2018 representatives of Cytec and EPA discussed the June 30, 2015 notice of violation and finding of violation.

15. Cytec violated Michigan Admin. Code r. 336.1201.

Compliance Program

16. Cytec must implement the compliance program outlined below in accordance with the requirements outlined below in order to achieve, demonstrate and maintain compliance with the Michigan SIP at its Facility.

Scrubber Performance Testing

17. Within 180 days of the effective date of this Order, Cytec must perform emission testing at each scrubber, in accordance with the requirements of Mich. Admin. Code r. 336.2003. Mich. Admin. Code r. 336.2003(3), to quantify the emission rate of methanol in pounds per hour and calculate the removal efficiency for methanol achieved by each scrubber.

18. Within 60 days of the effective date of this Order, Respondent must submit to EPA for its review and approval a proposed testing protocol that describes the methods and procedures for testing required by Paragraph 17, above. Sampling and analysis procedures must follow the EPA test methods, except to the extent that changes to the test methods are approved by EPA. The proposed testing protocol must also include the following operating parameters to be monitored during the proposed testing: water flow rate at the inlet to each scrubber, and information establishing that the testing will be conducted at maximum routine operating conditions as required

by Mich. Admin. Code r. 336.2003,(3). The performance test must consist of a full test (three runs, at least 1-hour each).

19. Respondent shall not conduct the emission test required by Paragraph 17, above, until receiving EPA's written approval. EPA may approve or disapprove with comments the proposed testing protocol. Within 15 days of receipt of a letter from EPA disapproving its proposed testing protocol, Respondent must submit a revised testing protocol to EPA that addresses EPA's comments.

20. Within 60 days of completion of the emission testing required by Paragraph 17, above, Respondent must submit to EPA and Michigan Department of Environmental Quality (MDEQ) a complete report of the performance testing that includes: a summary of the performance test results; the information required by Paragraph 18; identification of sampling and analytical procedures, and; all quality assured data generated during testing. The report must include the following for each scrubber: mass emission rate of methanol in pounds per hour; removal efficiency for methanol; and the inlet water flow rate for each scrubber averaged over the course of the performance test.

21. By no later than 30 days after the completion of the emission test required by Paragraph 17, Respondent must operate above the minimum inlet water flow rate for each scrubber established during the emission test.

22. By the date of the Performance Test, Respondent must continuously monitor and record 15-minutes average inlet water flow rate for each scrubber during process operations and calculate a 3-hour block average based on all individual 15-minute readings occurring during each 3-hour block.

Annual Leak Detection and Repair Program

23. Within 180 days of the effective date of the Order, Respondent must implement a component leak detection and repair (LDAR) program that shall consist of the following:
- a. An annual monitoring inspection in accordance with 40 C.F.R., Part 60, Appendix A, Method 21 of all components (pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in organic hazardous air pollutant (HAP) service) and including difficult to monitor components, as defined in Mich. Admin. Code r. 336.1104(e). In organic HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP as determined according to the provisions of 40 C.F.R. § 63.180(d). The first inspection must occur within 180 days of the effective date of the Order.
 - b. A component is leaking when a concentration of more than 500 ppm, using an instrument calibrated with methane or hexane, is measured by Method 21.
 - c. A component that is found to be leaking during the annual monitoring inspection or for another reason shall be repaired and re-monitored to verify that emissions are below 500 ppm, as soon as possible, but not more than 15 days after the leak is detected. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. Until the leak is repaired and retested to verify a successful repair, the component that is

causing the leak shall bear a weather-resistant, numbered identifying tag that indicates the date the leak was discovered.

- d. If a leak cannot be repaired within 15 calendar days because the leaking component cannot be repaired unless a process unit is shut down, then Cytec shall maintain a log of the non-repair and the leak shall be repaired at the next unit turnaround. Monitoring to verify repair must occur within 15 days after startup of the process unit following the repair.
- e. An unsafe-to-monitor component, as defined in Mich. Admin. Code r. 336.1121 (b), shall not be monitored until conditions would no longer expose monitoring personnel to immediate danger.
- f. Cytec shall maintain a log of all leaks detected pursuant to the provisions of Paragraph 23 that cannot be repaired within 15 days. This log shall identify all of the following: (i) The leaking component; (ii) The date on which the leak was discovered; (iii) The reason why the leak cannot be repaired within 15 days; (iv) The estimated date of repair; (v) the actual date of repair; and (vi) The number of the identifying tag.
- g. Cytec shall maintain a log of all unsafe-to-monitor components. This log shall list all of the following information: (i) The unsafe-to-monitor process unit; (ii) The number of the identifying tag; (iii) The reason why the component was unsafe to monitor; and (iv) The date, or dates, on which the component was unsafe to monitor.
- h. Not later than 60 calendar days after the end of the quarter in which the annual monitoring inspection is completed, Cytec shall submit to MDEQ a

report that contains all of the following information for that monitoring period: (i) The total number of components tested, by type; (ii) The total number of components which are found leaking and which are repaired, by type; (iii) The total number of components, by process unit and type, which are found to be leaking and which are not repaired within the required time period and the reason for non-repair; (iv) The type or types of monitoring equipment utilized; and (v) The total number of unsafe-to-monitor components that are logged as required.

Sump Monitoring

24. Within 180 days of the effective date of the Order, Respondent must implement an effluent sump (Equipment No. 633-001) LDAR program that shall consist of the following:

- a. An annual monitoring inspection in accordance with 40 C.F.R., Part 60, Appendix A, Method 21 at the locations indicated in Attachment A. The first inspection must occur within 180 days of the effective date of the Order.
- b. A sump is leaking when a concentration of more than 500 ppm, using an instrument calibrated with methane or hexane, is measured by Method 21.
- c. If the sump is found to be leaking during the annual monitoring inspection, Cytec shall investigate the root cause of the emissions, determine reasonably available corrective actions, and undertake as expeditiously as reasonably possible such reasonably available corrective actions as are necessary to correct the root cause and to prevent a recurrence.
- d. Cytec shall maintain records of each root cause investigation and corrective actions that shall include: (i) An identification and detailed analysis setting

- forth the root cause and any material contributing cause(s); (ii) An analysis of the measure/es reasonably available to prevent the root cause and any material contributing cause(s) from recurring. This analysis shall include an evaluation of possible design, operational, and maintenance measures; and (iii) The corrective actions taken or to be taken.
- e. Not later than 60 calendar days after the end of the quarter in which the annual monitoring inspection is completed, Cytex shall submit, to the MDEQ, a report that contains all the following information for that monitoring period: (i) The areas of the sump tested, the dates tested, and the readings; and (ii) records of each root cause investigation and corrective actions.

Permit Requirements

25. Within 240 days of the effective date of the Order, Respondent shall submit to MDEQ, with a copy to EPA, complete applications, amendments and/or supplements to incorporate as "applicable requirements" the following limits and standards into a Title I, federally-enforceable permit, issued pursuant to a SIP approved construction permit program under Subchapter I of the CAA, to be made permanent as long as the source remains an area source:
- a. A Facility-specific annual HAP emission limit below 10 tons per year (tpy) for a single HAP and 25 tpy of combined HAPs from discrete point sources, including but not limited to, those sources exhausting at the two scrubbers; and fugitive emission sources, including those included in the LDAR program and wastewater that contains HAPs;

- b. A practicably enforceable HAP limit for each discrete point source and each fugitive emission source referenced above, that includes: (i) the averaging period for the limitation (hourly, daily, monthly, annually); (ii) the method (e.g. stack test, continuous emissions monitoring, engineering assessment, equations, emission factors, etc.) for determining compliance; and (iii) monitoring, record keeping, and reporting requirements; including, but not limited to the requirements in Paragraph 21-24.
- c. A requirement to operate above the average minimum inlet water flow rate for each scrubber established during the most recent emission test, and continuously monitor and record 15-minutes average inlet water flow rate for each scrubber and calculate 3-hour block averages to demonstrate compliance, as required by Paragraph 21 and 22.
- d. A requirement to implement a LDAR program, as required by Paragraph 23.
- e. A requirement to implement a sump LDAR program, as required by Paragraph 24.
- f. A requirement to annually quantify and maintain records of emissions from each HAP emission source, including any deviations from a control device, process upsets, or other HAP emissions events; and total emissions for the Facility for each single HAP emitted and for combined HAPs. For fugitive sources this method must be the 1995 Protocol for Equipment Leak Emission Estimates for Fugitive Sources (EPA-453/R-95-017).

26. Pursuant to Section 114(a)(1) of the CAA, 42 U.S.C. § 7414(a)(1), for the first two years following the effective date, Cytec must submit to EPA the following reports simultaneously with their submission to MDEQ:

- a. Component annual LDAR program report, required by Paragraph 23.h; and
- b. Sump annual LDAR program report, required by Paragraph 24.e.

27. Cytec must send all reports required by this Order to be sent to EPA to: R5AirEnforcement@epa.gov.

General Provisions

28. This Order does not affect Cytec's responsibility to comply with other federal, state, and local laws.

29. This Order does not restrict EPA's authority to enforce the CAA and its implementing regulations.

30. Failure to comply with this Order may subject Cytec to the statutory maximum civil penalty of up to \$97,229 per day for each violation under Section 113 of the CAA, 42 U.S.C. § 7413, and 40 C.F.R. Part 19.

31. The terms of this Order are binding on Cytec, its assignees and successors. Cytec must give notice of this Order to any successors in interest prior to transferring ownership and must simultaneously verify to EPA, at the above address, that it has given the notice.

32. Cytec may assert a claim of business confidentiality under 40 C.F.R. Part 2, Subpart B, for any portion of the information it submits to EPA. Information subject to a business confidentiality claim is available to the public only to the extent allowed by 40 C.F.R. Part 2, Subpart B. If Cytec fails to assert a business confidentiality claim, EPA may make all submitted information available, without further notice, to any member of the public who requests it.

Emission data provided under Section 114 of the CAA, 42 U.S.C. § 7414, is not entitled to confidential treatment under 40 C.F.R. Part 2, Subpart B. "Emission data" is defined at 40 C.F.R. § 2.301.

33. This order is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 et seq., because it seeks collection of information by an agency from specific individuals or entities as part of an administrative action or investigation. To aid in our electronic recordkeeping efforts, please furnish an electronic copy on physical media such as compact disk, flash drive or other similar item. If it is not possible to submit the information electronically, submit the response to this Order without staples; paper clips and binder clips, however, are acceptable.

34. EPA may use any information submitted under this Order in an administrative, civil judicial, or criminal action.

35. Cytec agrees to the terms of this Order. Cytec waives any remedies, claims for relief, and otherwise available rights to judicial or administrative review that it may have with respect to any issue of fact or law set forth in this Order, including any right of judicial review under Section 307(b) of the CAA, 42 U.S.C. § 7607(b).

36. This Order is effective on the date of signature by the Director of the Air and Radiation Division. This Order will terminate two years from the effective date, provided that Cytec has complied with all terms of the Order throughout its duration.

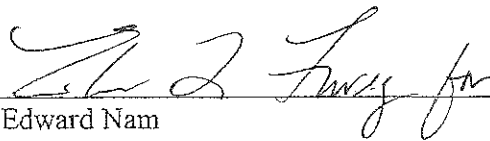
Cytec Industries, Inc. ^①

Date	<u>4 / 11 / 19</u>	<u>Anthony Saviano</u>
		Anthony Saviano North American General Counsel and Officer of Cytec Industries Inc.

United States Environmental Protection Agency

4/25/19

Date

A handwritten signature in black ink, appearing to read "Edward Nam", written over a horizontal line.

Edward Nam

Director

Air and Radiation Division

U.S. Environmental Protection Agency, Region 5

CERTIFICATE OF MAILING

I certify that I sent the Administrative Consent Order, EPA-5-19-113(a)-MI-01, by certified mail, return receipt requested, to:

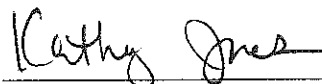
Anthony Saviano
North American General Counsel and Officer of Cytec Industries, Inc.
Cytec Industries, Inc.
3115 Miller Road
Kalamazoo, Michigan

I also certify that I sent a copy of the Administrative Consent Order, EPA-5-19-113(a)-MI-01, by E-mail to:

Jenine Camilleri
Enforcement Unit Supervisor
Air Quality Division
Michigan Department of Environmental Quality
CamilleriJ@michigan.gov

Mary Douglas
Kalamazoo District Supervisor
Michigan Department of Environmental Quality
douglasm@michigan.gov

On the 26th day of April 2019.



Kathy Jones
Program Technician
AECAB, PAS

CERTIFIED MAIL RECEIPT
NUMBER:

7018 0680 0002 2159 3963